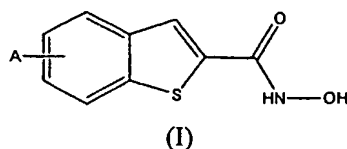
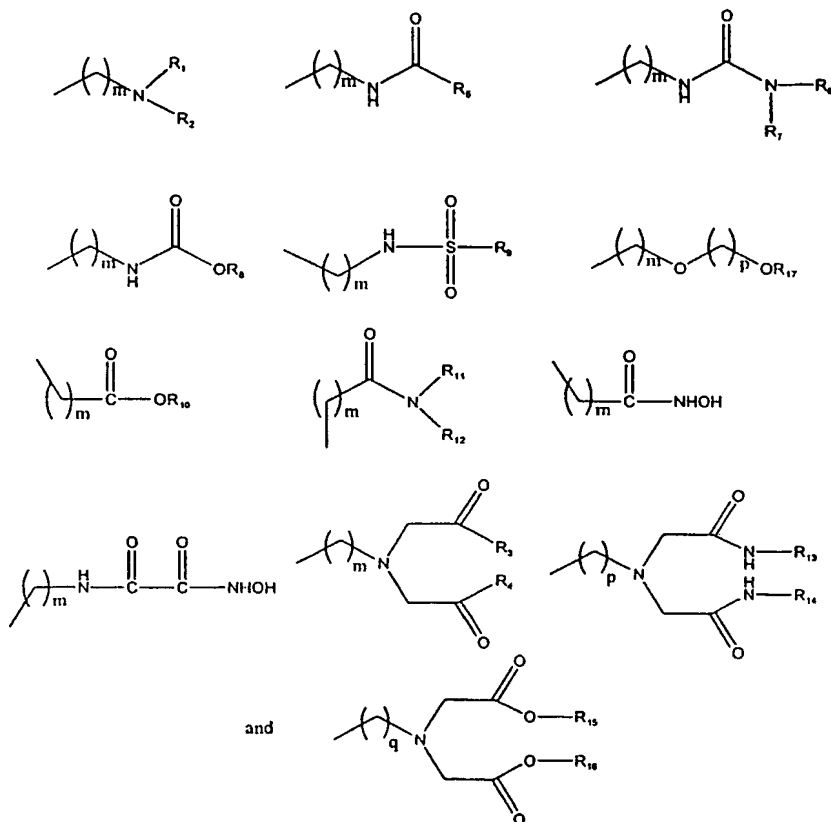


What is claimed is:

1. A compound represented by the following structural Formula:



wherein A is alkyl, aryl or a group selected from:

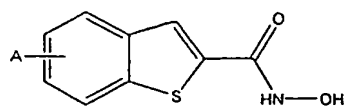


wherein R_1 - R_{17} are independently of each other a hydrogen or an unsubstituted or substituted alkyl, alkenyl, aryl, heteroalkyl, cycloalkyl, heterocyclyl, alkylaryl, cycloalkylaryl, alkylcycloalkyl, acyl, sulfonyl, or alkylheterocyclyl; or one or more of R_1 and R_2 , R_6 and R_7 , and R_{11} and R_{12} , together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic ring;

m , p and q are independently of each other 0, 1 or 2;

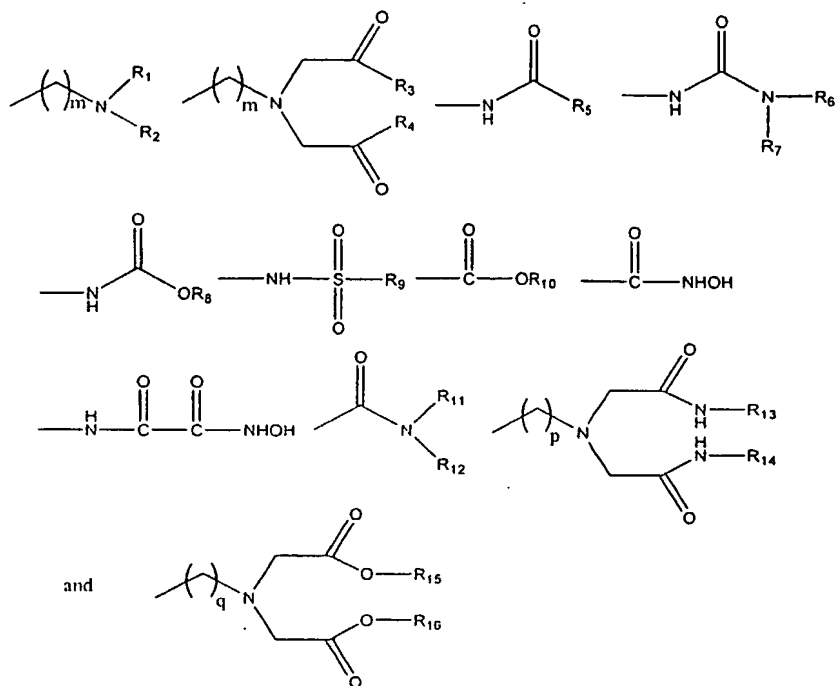
or a stereoisomer, enantiomer, racemate, pharmaceutically acceptable salt, solvate, hydrate or polymorph thereof.

2. The compound of Claim 1 of the Formula I:



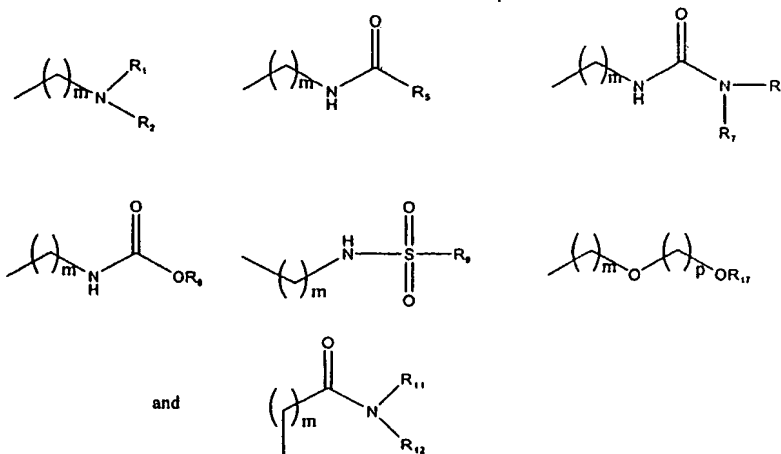
(I)

wherein A is alkyl, aryl or a group selected from:

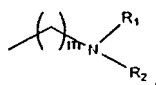


- 5 wherein R_1 - R_{16} are independently of each other a hydrogen or an unsubstituted or substituted alkyl, alkenyl, aryl, cycloalkyl, heterocyclyl, alkylaryl, alkylcycloalkyl or alkylheterocyclyl; or one or more of R_1 and R_2 , R_6 and R_7 , and R_{11} and R_{12} , together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic ring;
- 10 m , p and q are independently of each other 0, 1 or 2;
- or a stereoisomer, enantiomer, racemate, pharmaceutically acceptable salt, solvate, hydrate or polymorph thereof.

3. The compound of claim 1, wherein A is selected from:



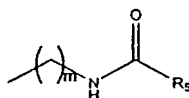
4. The compound of claim 1, wherein A is



- 5 wherein m is zero or one.

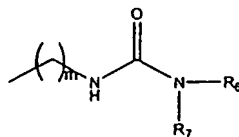
5. The compound of claim 4, wherein at least one of R₁ and R₂ is phenyl, naphthyl, biphenyl, benzyl, -CH₂CH₂Ph, -CH₂CH₂CH₂Ph, -CH=CHPh, cyclohexyl, quinoliny, isoquinoliny, -CH₂-cyclohexyl, -CH₂-quinoliny, -CH₂-isoquinoliny, pyridyl, -CH(Ph)₂, methyl, ethyl, propyl, isopropyl, butyl, isobutyl sec-butyl or tert-butyl.

- 10 6. The compound of claim 1, wherein A is



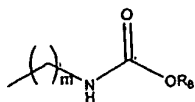
7. The compound of claim 6, wherein R₅ is phenyl, naphthyl, biphenyl, benzyl, -CH₂CH₂Ph, -CH=CHPh, cyclohexyl, quinoliny, isoquinoliny, -CH₂-cyclohexyl, -CH₂-quinoliny, -CH₂-isoquinoliny, pyridyl, -CH(Ph)₂, methyl, ethyl, propyl, isopropyl, butyl, isobutyl sec-butyl or tert-butyl.

8. The compound of claim 1, wherein A is



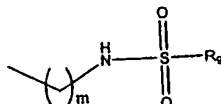
9. The compound of claim 8, wherein at least one of R₆ and R₇ is phenyl, naphthyl, biphenyl, benzyl, -CH₂CH₂Ph, -CH=CHPh, cyclohexyl, quinoliny, isoquinoliny, -CH₂-cyclohexyl, -CH₂-quinoliny, -CH₂-isoquinoliny, pyridyl, -CH(Ph)₂, methyl, ethyl, propyl, isopropyl, butyl, isobutyl sec-butyl or tert-butyl.

10. The compound of claim 1, wherein A is



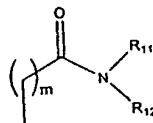
11. The compound of claim 10, wherein R_6 is phenyl, naphthyl, biphenyl, benzyl, $-\text{CH}_2\text{CH}_2\text{Ph}$, $-\text{CH}=\text{CHPh}$, cyclohexyl, quinolinyl, isoquinolinyl, $-\text{CH}_2\text{-cyclohexyl}$, $-\text{CH}_2\text{-quinolinyl}$, $-\text{CH}_2\text{-isoquinolinyl}$, pyridyl, $-\text{CH}(\text{Ph})_2$, methyl, ethyl, propyl, isopropyl, butyl, isobutyl sec-butyl or tert-butyl.

12. The compound of claim 1, wherein A is



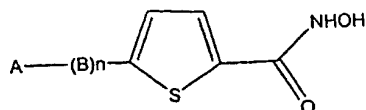
13. The compound of claim 13, wherein R_9 is phenyl, 1-naphthyl, 2-naphthyl, biphenyl, benzyl, $-\text{CH}_2\text{CH}_2\text{Ph}$, $-\text{CH}=\text{CHPh}$, cyclohexyl, quinolinyl, isoquinolinyl, thiophenyl, $-\text{CH}_2\text{-cyclohexyl}$, $-\text{CH}_2\text{-quinolinyl}$, $-\text{CH}_2\text{-isoquinolinyl}$, pyridyl, $-\text{CH}(\text{Ph})_2$, methyl, ethyl, propyl, isopropyl, butyl, isobutyl sec-butyl or tert-butyl.

14. The compound of claim 1, wherein A is



15. The compound of claim 14, wherein at least one of R_{11} and R_{12} is phenyl, naphthyl, biphenyl, benzyl, $-\text{CH}_2\text{CH}_2\text{Ph}$, $-\text{CH}=\text{CHPh}$, cyclohexyl, quinolinyl, isoquinolinyl, $-\text{CH}_2\text{-cyclohexyl}$, $-\text{CH}_2\text{-quinolinyl}$, $-\text{CH}_2\text{-isoquinolinyl}$, pyridyl, $-\text{CH}(\text{Ph})_2$, methyl, ethyl, propyl, isopropyl, butyl, isobutyl sec-butyl or tert-butyl.

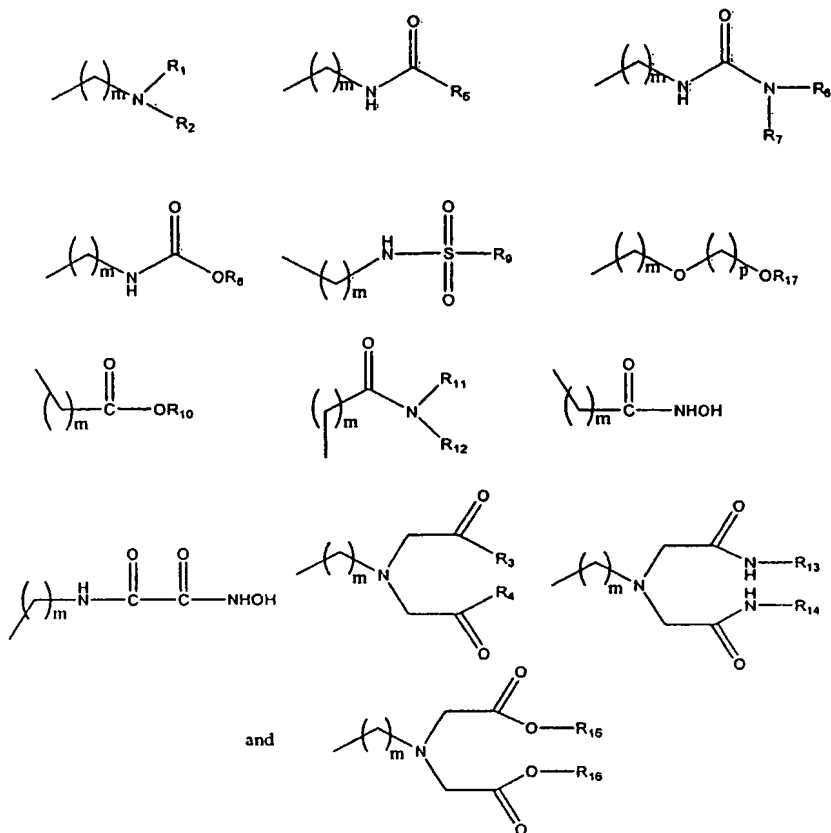
16. A compound represented by the following structural Formula:



(II)

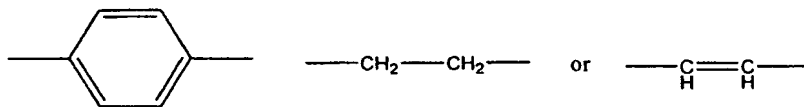
wherein

A is alkyl, aryl or a group selected from:



wherein R_1 - R_{17} are independently of each other a hydrogen or an unsubstituted or substituted alkyl, alkenyl, aryl, heteroalkyl, cycloalkyl, heterocyclyl, alkylaryl, cycloalkylaryl, alkylcycloalkyl, acyl, sulfonyl, or alkylheterocyclyl; or one or more of R_1 and R_2 , R_6 and R_7 , and R_{11} and R_{12} , together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic ring;

B is

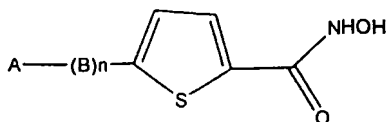


n is 0 or 1;

m, and p are independently of each other 0, 1 or 2;

or a stereoisomer, enantiomer, racemate, pharmaceutically acceptable salt, solvate, hydrate or polymorph thereof.

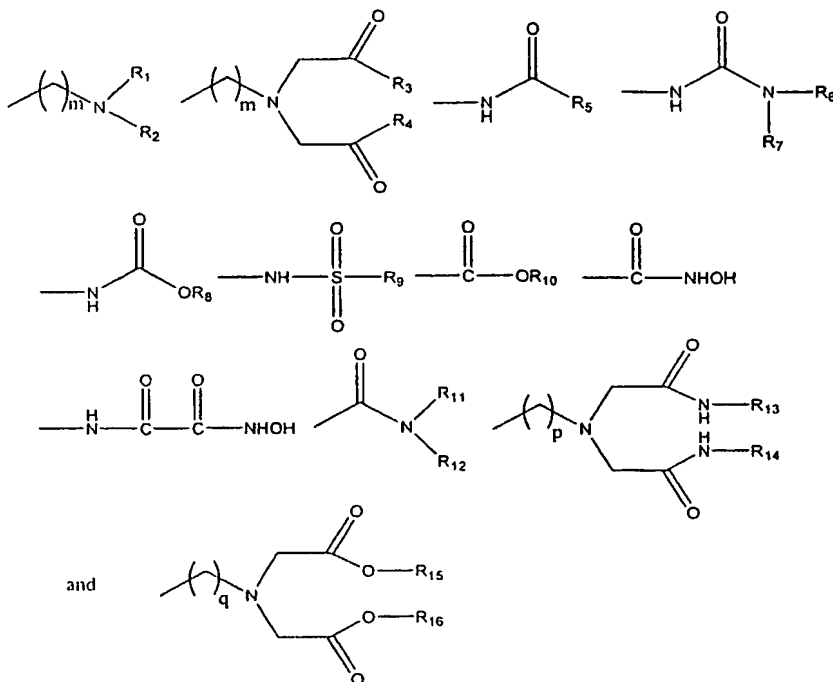
17. The compound of Claim 16 of the Formula II:



(II)

wherein

A is alkyl, aryl or a group selected from:

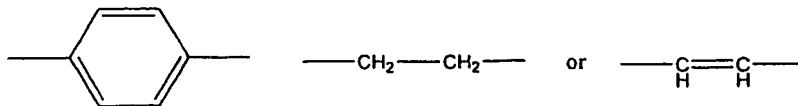


5

wherein R_1 - R_{16} are independently of each other a hydrogen or an unsubstituted or substituted alkyl, alkenyl, aryl, cycloalkyl, heterocyclyl, alkylaryl, alkylcycloalkyl or alkylheterocyclyl; or one or more of R_1 and R_2 , R_6 and R_7 , and R_{11} and R_{12} , together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic ring;

10

B is



n is 0 or 1;

m, p and q are independently of each other 0, 1 or 2;

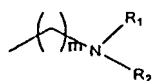
15

or a stereoisomer, enantiomer, racemate, pharmaceutically acceptable salt, solvate, hydrate or polymorph thereof.

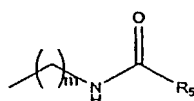
18. The compound of claim 16, wherein n is 0.

19. The compound of claim 16, wherein n is 1.

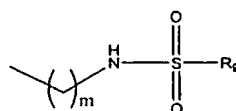
20. The compound of claim 16, wherein A is



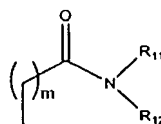
5 21. The compound of claim 16, wherein A is



22. The compound of claim 16, wherein A is



23. The compound of claim 16, wherein A is



10

24. A compound selected from:

6-Phenylacetyl-amino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

6-Benzoylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

15

6-[(Biphenyl-4-carbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

6-(3-Phenyl-propionyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

20

6-[(Naphthalene-2-carbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

6-Isobutrylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

Quinoline-2-carboxylic acid (2-hydroxycarbamoyl-benzo[b]thiophen-6-yl)-amide;

25

N-(2-Hydroxycarbamoyl-benzo[b]thiophen-6-yl)-nicotinamide;

6-Diphenylacetyl-amino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

30

6-[(Naphthalene-1-carbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

6-(3,4-Dimethoxy-benzoylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

6-[2-(3,4-Dimethoxy-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

35

6-[2-(4-Fluoro-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

6-[2-(2,5-Dimethoxy-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

- 6-[2-(3-Methoxy-phenyl)-acetylamino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5 6-[2-(4-Chloro-phenyl)-acetylamino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[2-(4-Methoxy-phenyl)-acetylamino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(2-Phenyl-butyrylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 10 6-(Methyl-phenylacetyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(2-Pyridin-2-yl-acetylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(2-Pyridin-3-yl-acetylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 6-(2-Phenyl-propionylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{1-(4-Chloro-phenyl)-cyclopropanecarbonyl}-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 6-[(1-Phenyl-cyclopropanecarbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{1-(4-Chloro-phenyl)-cyclobutanecarbonyl}-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 6-[2-(4-Chloro-phenyl)-2-methyl-propionylamino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(2S-Phenyl-butyrylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 6-(2R-Phenyl-butyrylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(Benzoylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 6-(Phenylacetyl-amino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[(Naphthalene-1-carbonyl)-amino]-methyl}}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 6-[(2-Methyl-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(4-Methyl-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(3-Methoxy-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 45 6-[(4-Methoxy-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(3,4-Dimethoxy-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 50 N-(2-Hydroxycarbamoyl-benzo[b]thiophen-6-ylmethyl)-nicotinamide;

- 6-(Isobutyrylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(2-Methoxy-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5 6-[(4-Chloro-benzoylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-Phenylmethanesulfonylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-Benzenesulfonylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 10 6-(Biphenyl-4-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(Naphthalene-1-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 6-(Naphthalene-2-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(Toluene-4-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(Benzenesulfonylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 6-(Phenylmethanesulfonylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(Naphthalene-1-sulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 6-[(Naphthalene-2-sulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(Toluene-4-sulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 6-[(2,4,6-Trimethyl-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(4-tert-Butyl-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 6-[(4-Fluoro-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 6-[(4-Chloro-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(3-Chloro-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 45 6-[(4-Bromo-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 50 6-[(3-Bromo-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

- 6-[(3-Methoxy-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5 6-[(4-Nitro-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(4-Methoxy-benzenesulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 10 6-[(Thiophene-2-sulfonylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 6-[[3-(4-Methoxy-phenoxy)-propane-1-sulfonylamino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(3-Benzyl-ureido)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- (2-Hydroxycarbamoyl-benzo[b]thiophen-6-yl)-carbamic acid ethyl ester;
- 20 (2-Hydroxycarbamoyl-benzo[b]thiophen-6-yl)-carbamic acid benzyl ester;
- 6-(3-Phenethyl-ureido)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 6-(3-Benzyl-ureidomethyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- (2-Hydroxycarbamoyl-benzo[b]thiophen-6-ylmethyl)-carbamic acid benzyl ester;
- 6-[3-(4-Isopropyl-phenyl)-ureidomethyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 6-[3-(4-tert-Butyl-phenyl)-ureidomethyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 6-[3-(3,5-Bis-trifluoromethyl-phenyl)-ureidomethyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[3-(3-Phenoxy-phenyl)-ureidomethyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 5-Benzoylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-Phenylacetyl-amino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-(3-Phenyl-propionyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 45 5-(3-Phenyl-acryloyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(Naphthalene-1-carbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 50 5-[(Naphthalene-2-carbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

- Quinoline-2-carboxylic acid (2-hydroxycarbamoyl-benzo[b]thiophen-5-yl)-amide;
N-(2-Hydroxycarbamoyl-benzo[b]thiophen-5-yl)-nicotinamide;
- 5 5-[(Biphenyl-4-carbonyl)-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-Diphenylacetyl-amino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-Isobutyrylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 10 5-[2-(4-Fluoro-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-[2-(3-Methoxy-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 5-[2-(3,4-Dimethoxy-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-[2-(2,5-Dimethoxy-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-(2-Phenyl-butyrylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 5-[2-(4-Chloro-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-[2-(4-Methoxy-phenyl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 5-[[1-(4-Chloro-phenyl)-cyclopentanecarbonyl]-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-(Naphthalene-2-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 5-(Toluene-4-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-Benzenesulfonylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-Phenylmethanesulfonylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 5-(Naphthalene-1-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-(Biphenyl-4-sulfonylamino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 (2-Hydroxycarbamoyl-benzo[b]thiophen-5-yl)-carbamic acid benzyl ester;
(2-Hydroxycarbamoyl-benzo[b]thiophen-5-yl)-carbamic acid ethyl ester;
- 45 5-(3-Benzyl-ureido)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-Dibenzylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
6-Dibenzylamino-benzo[b]thiophene-2-carboxylic acid methyl ester;
- 50 6-Dibenzylamino-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
5-(Bis-phenylcarbamoymethyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
6-(Bis-phenylcarbamoymethyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

- 6-[2-(4-Phenyl-piperazin-1-yl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5 6-(2-3,4-Dihydro-1H-isoquinolin-2-yl-acetyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[2-(4-Benzyl-piperidin-1-yl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 10 4-[(2-Hydroxycarbamoyl-benzo[b]thiophen-6-ylcarbamoyl)-methyl]-piperazine-1-carboxylic acid benzyl ester;
- 6-(2-Dibenzylamino-acetyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 6-{2-[4-(3-Methoxy-phenyl)-piperazin-1-yl]-acetyl-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[2-(4-Pyrimidin-2-yl-piperazin-1-yl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 6-{2-[4-(2-Methoxy-phenyl)-piperazin-1-yl]-acetyl-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[2-(4-Pyridin-2-yl-piperazin-1-yl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 6-[2-(4-Acetyl-piperazin-1-yl)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(2-Piperidin-1-yl-acetyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 6-(2-Morpholin-4-yl-acetyl-amino)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[2-(Benzyl-phenethyl-amino)-acetyl-amino]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 {tert-Butoxycarbonylmethyl-[(2-hydroxycarbamoyl-benzo[b]thiophen-6-ylcarbamoyl)-methyl]-amino}-acetic acid tert-butyl ester;
- 6-{2-[4-(2-Chloro-phenyl)-piperazin-1-yl]-acetyl-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 6-{2-[4-(3-Chloro-phenyl)-piperazin-1-yl]-acetyl-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 4-[(2-Hydroxycarbamoyl-benzo[b]thiophen-6-ylcarbamoyl)-methyl]-[1,4]diazepane-1-carboxylic acid benzyl ester;
- 45 4-[(2-Hydroxycarbamoyl-benzo[b]thiophen-6-ylcarbamoyl)-methyl]-piperazine-1-carboxylic acid ethyl ester;
- 6-{2-[4-(4-Methoxy-phenyl)-piperazin-1-yl]-acetyl-amino}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 50 Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-[[2-(1H-indol-2-yl)-ethyl]-amide];
- Benzo[b]thiophene-2,6-dicarboxylic acid 6-benzylamide 2-hydroxyamide;

- Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-[(pyridin-2-ylmethyl)-amide];
- 5 Benzo[b]thiophene-2,6-dicarboxylic acid 6-[(1-benzyl-piperidin-4-yl)-amide] 2-hydroxyamide;
- Benzo[b]thiophene-2,6-dicarboxylic acid 6-[(2,2-diphenyl-ethyl)-amide] 2-hydroxyamide;
- Benzo[b]thiophene-2,6-dicarboxylic acid 6-[(1,2-diphenyl-ethyl)-amide] 2-hydroxyamide;
- 10 Benzo[b]thiophene-2,6-dicarboxylic acid 6-benzhydryl-amide 2-hydroxyamide;
- Benzo[b]thiophene-2,6-dicarboxylic acid 6-[(1H-benzimidazol-2-ylmethyl)-amide] 2-hydroxyamide;
- 15 Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-[(2-pyridin-2-yl-ethyl)-amide];
- Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-[(1,2,3,4-tetrahydro-naphthalen-1-yl)-amide];
- 20 6-(Piperidine-1-carbonyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-phenylamide;
- Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-indan-1-ylamide;
- 25 6-(4-Phenyl-piperazine-1-carbonyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[4-(4-Chloro-phenyl)-piperazine-1-carbonyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-[(3-phenyl-propyl)-amide];
- Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-(phenethyl-amide);
- 6-(4-Benzyl-piperidine-1-carbonyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 6-(4-Benzyl-piperazine-1-carbonyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-quinolin-8-ylamide;
- 40 Benzo[b]thiophene-2,6-dicarboxylic acid 2-hydroxyamide 6-[(4-phenyl-thiazol-2-yl)-amide];
- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-(2-methoxy-benzylamide);
- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-(3-methoxy-benzylamide);
- 45 Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-(4-methoxy-benzylamide);
- Benzo[b]thiophene-2,5-dicarboxylic acid 5-(2-chloro-benzylamide) 2-hydroxyamide;
- 50 Benzo[b]thiophene-2,5-dicarboxylic acid 5-(3-chloro-benzylamide) 2-hydroxyamide;
- Benzo[b]thiophene-2,5-dicarboxylic acid 5-(4-chloro-benzylamide) 2-hydroxyamide;
- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-indan-1-ylamide;

- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-{{2-(1H-indol-3-yl)-ethyl}-amide};
- Benzo[b]thiophene-2,5-dicarboxylic acid 5-[(3,3-diphenyl-propyl)-amide] 2-hydroxyamide;
- 5 Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-[(4-phenyl-butyl)-amide];
- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-phenylamide;
- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-(phenethyl-amide);
- 10 Benzo[b]thiophene-2,5-dicarboxylic acid 5-benzylamide 2-hydroxyamide;
- Benzo[b]thiophene-2,5-dicarboxylic acid 2-hydroxyamide 5-[(3-phenyl-propyl)-amide];
- 15 Benzo[b]thiophene-2,5-dicarboxylic acid 5-(bis-phenylcarbamoylmethyl-amide) 2-hydroxyamide;
- 5-[(3-Methoxy-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-(Benzylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 5-Phenylaminomethyl-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(3-Benzoyloxy-phenylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 5-[(4-Methoxy-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(2-Chloro-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(4-Chloro-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 5-[(Benzhydryl-amino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-(Phenethylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 5-[(2,2-Diphenyl-ethylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-{{2-(3,4-Bis-benzyloxy-phenyl)-ethylamino}-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 5-[(3-Phenyl-propylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(3,3-Diphenyl-propylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(4-Phenyl-butylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 45 5-[(2-Morpholin-4-yl-ethylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(Cyclohexylmethyl-amino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 50 5-[(2-Methoxy-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-[(3-Chloro-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;

- 5-{{(1H-Benzimidazol-2-ylmethyl)-amino}-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5 5-{{(Pyridin-2-ylmethyl)-amino}-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-{{[2-(3,4-Dimethoxy-phenyl)-ethylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 10 5-{{[2-(1H-Indol-3-yl)-ethylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5-{{[1-Benzyl-piperidin-4-ylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(Benzylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 6-{{[2-Methoxy-benzylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[3-Methoxy-benzylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 6-Phenylaminomethyl-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-(Phenethylamino-methyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[3-Phenyl-propylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 6-{{[2-Chloro-benzylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[3-Chloro-benzylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 6-{{[4-Chloro-benzylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[(Benzo[1,3]dioxol-5-ylmethyl)-amino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 6-(Indan-1-ylaminomethyl)-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[9H-Fluoren-9-ylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[1,2-Diphenyl-ethylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 40 6-{{[Cyclohexylmethyl-amino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[1,2,3,4-Tetrahydro-naphthalen-1-ylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 45 6-{{[2-(2-Methyl-1H-indol-3-yl)-ethylamino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-{{[(Pyridin-2-ylmethyl)-amino]-methyl}-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 50

- 6-[(1-Benzyl-piperidin-4-ylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 5 6-[(4-Methoxy-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[[2-(1H-Indol-3-yl)-ethylamino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(4-Methoxy-benzylamino)-methyl]-benzo[b]thiophene-2-carboxylic acid ethyl ester;
- 10 6-[[Cyclohexyl-(4-methoxy-benzyl)-amino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[[4-(4-Methoxy-benzyl)-(tetrahydro-pyran-4-yl)-amino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 15 6-[[2-(2-Hydroxy-ethyl)-(4-methoxy-benzyl)-amino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 20 6-[[Isopropyl-(4-methoxy-benzyl)-amino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[[4-(4-Methoxy-benzyl)-methyl-amino]-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 25 6-[(Acetyl-benzyl-amino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 6-[(Benzyl-methanesulfonyl-amino)-methyl]-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 30 6-Benzylloxymethyl-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 3-Chloro-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- 35 6-Nitro-benzo[b]thiophene-2-carboxylic acid hydroxyamide;
- N-Hydroxy-N'-(2-hydroxycarbamoyl-benzo[b]thiophen-6-yl)-oxalamide;
- 5-{3-[(Dibenzylamino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;
- 40 5-{3-[(Benzyl-quinolin-3-ylmethyl-amino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;
- 5-{3-[(3,4-Dihydro-1H-isoquinolin-2-ylmethyl)-phenyl]-thiophene-2-carboxylic acid hydroxyamide;
- 45 5-{3-[(4-Phenyl-piperazin-1-ylmethyl)-phenyl]-thiophene-2-carboxylic acid hydroxyamide;
- 5-{3-[(Benzyl-quinolin-4-ylmethyl-amino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;
- 50 5-{3-[(Benzyl-phenethyl-amino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;
- 5-{3-[(Bis-phenylcarbamoylmethyl-amino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;

- 5- {3-[(Phenethyl-quinolin-3-ylmethyl-amino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;
- 5 5- {3-[(Phenethyl-quinolin-4-ylmethyl-amino)-methyl]-phenyl}-thiophene-2-carboxylic acid hydroxyamide;
- 5-(3-[[3-Phenyl-propyl]-quinolin-4-ylmethyl-amino]-methyl)-phenyl)-thiophene-2-carboxylic acid hydroxyamide;
- 10 5-(3-[[3-Phenyl-propyl]-quinolin-3-ylmethyl-amino]-methyl)-phenyl)-thiophene-2-carboxylic acid hydroxyamide;
- 15 5-(3-[[Benzyl-(3-phenyl-propyl)-amino]-methyl]-phenyl)-thiophene-2-carboxylic acid hydroxyamide;
- 5-(4-Phenylcarbamoyl-phenyl)-thiophene-2-carboxylic acid hydroxyamide;
- 5-(4-Benzylcarbamoyl-phenyl)-thiophene-2-carboxylic acid hydroxyamide;
- 20 5-(2-Phenylcarbamoyl-vinyl)-thiophene-2-carboxylic acid hydroxyamide;
- 5-(2-Phenylcarbamoyl-ethyl)-thiophene-2-carboxylic acid hydroxyamide;
- 25 5-(2-Benzylcarbamoyl-vinyl)-thiophene-2-carboxylic acid hydroxyamide;
- 5-(2-Phenethylcarbamoyl-vinyl)-thiophene-2-carboxylic acid hydroxyamide;
- 30 5-[2-(3-Phenyl-propylcarbamoyl)-vinyl]-thiophene-2-carboxylic acid hydroxyamide;
- 5-[2-(Cyclohexylmethyl-carbamoyl)-vinyl]-thiophene-2-carboxylic acid hydroxyamide;
- 5-(2-Cyclohexylcarbamoyl-vinyl)-thiophene-2-carboxylic acid hydroxyamide;
- 35 5-[2-(2,2-Diphenyl-ethylcarbamoyl)-vinyl]-thiophene-2-carboxylic acid hydroxyamide;
- 5-[2-(3-Benzoyloxy-phenylcarbamoyl)-vinyl]-thiophene-2-carboxylic acid hydroxyamide;
- 5-(2-Benzylcarbamoyl-ethyl)-thiophene-2-carboxylic acid hydroxyamide;
- 40 5-(2-Phenethylcarbamoyl-ethyl)-thiophene-2-carboxylic acid hydroxyamide;
- 5-[2-(3-Phenyl-propylcarbamoyl)-ethyl]-thiophene-2-carboxylic acid hydroxyamide;
- 45 5-[2-(2,2-Diphenyl-ethylcarbamoyl)-ethyl]-thiophene-2-carboxylic acid hydroxyamide;
- 5-(2-Cyclohexylcarbamoyl-ethyl)-thiophene-2-carboxylic acid hydroxyamide;
- 5-Phenylacetyl-amino-thiophene-2-carboxylic acid hydroxyamide;
- 50 5-Benzenesulfonylamino-thiophene-2-carboxylic acid hydroxyamide;
- 5-Benzoylamino-thiophene-2-carboxylic acid hydroxyamide;

- 5-[(Naphthalene-1-carbonyl)-amino]-thiophene-2-carboxylic acid hydroxyamide;
5-[(Naphthalene-2-carbonyl)-amino]-thiophene-2-carboxylic acid hydroxyamide;
5 5-Phenylmethanesulfonylamino-thiophene-2-carboxylic acid hydroxyamide;
5-(Naphthalene-2-sulfonylamino)-thiophene-2-carboxylic acid hydroxyamide; and
5-(Naphthalene-1-sulfonylamino)-thiophene-2-carboxylic acid hydroxyamide
10 or a stereoisomer, enantiomer, racemate, pharmaceutically acceptable salt, solvate, hydrate or polymorph thereof.
25. The compound of any of claims 1-23, wherein said compound is a Class I histone deacetylase
15 (Class I HDAC) inhibitor.
26. The compound of claim 24, wherein said Class I histone deacetylase is histone deacetylase 1 (HDAC-1), histone deacetylase 2 (HDAC-2), histone deacetylase 3 (HDAC-3) or histone deacetylase 8 (HDAC-8).
27. The compound of claim 24, wherein said Class I histone deacetylase is histone deacetylase 1
20 (HDAC-1).
28. The compound of any of claims 1-23, wherein said compound is a Class II histone deacetylase (Class II HDAC) inhibitor.
29. The compound of claim 27, wherein said Class II histone deacetylase is histone deacetylase 4 (HDAC-4), histone deacetylase 5 (HDAC-8), histone deacetylase 6 (HDAC-6), histone deacetylase 7 (HDAC-7) or histone deacetylase 9 (HDAC-9).
25
30. A pharmaceutical composition comprising a pharmaceutically effective amount of the compound of any of claims 1-23, and a pharmaceutically acceptable carrier.
31. A method of inhibiting the activity of histone deacetylase 1 (HDAC-1), comprising contacting HDAC-1 with an effective amount of the compound of any one of claims 1-23 so as to inhibit
30 the activity of HDAC-1.
32. A method of treating cancer in a subject in need of treatment comprising administering to said subject a therapeutically effective amount the compound of any one of claims 1-23.
33. The method of claim 31, wherein the cancer is selected from the group consisting of acute leukemia such as acute lymphocytic leukemia (ALL) and acute myeloid leukemia (AML);
35 chronic leukemia such as chronic lymphocytic leukemia (CLL) and chronic myelogenous leukemia (CML), Hairy Cell Leukemia, cutaneous T-cell lymphoma (CTCL), noncutaneous peripheral T-cell lymphoma, lymphoma associated with human T-cell lymphotropic virus (HTLV) such as adult T-cell leukemia/lymphoma (ATLL), Hodgkin's disease, non-Hodgkin's lymphoma, large-cell lymphoma, diffuse large B-cell lymphoma (DLBCL); Burkitt's
40 lymphoma; primary central nervous system (CNS) lymphoma; multiple myeloma; childhood

- solid tumors such as brain tumor, neuroblastoma, retinoblastoma, Wilm's tumor, bone tumor, soft-tissue sarcoma, head and neck cancers (e.g., oral, laryngeal and esophageal), genito urinary cancers (e.g., prostate, bladder, renal, uterine, ovarian, testicular, rectal and colon), lung cancer, breast cancer, pancreatic cancer, melanoma and other skin cancers, stomach cancer, brain tumors, liver cancer and thyroid cancer.
- 5
34. A method of treating a thioredoxin (TRX)-mediated disease in a subject in need thereof, comprising the step of administering to said subject a therapeutically effective amount of the compound of any one of claims 1-75, wherein the amount of said compound is effective to treat the TRX-mediated disease in said subject.
- 10
35. The method of claim 33, wherein said TRX-mediated disease is an inflammatory disease, an allergic disease, an autoimmune disease, a disease associated with oxidative stress or a disease characterized by cellular hyperproliferation.
36. A method of treating a disease of the central nervous system in a subject in need thereof comprising administering to said subject a therapeutically effective amount of the compound of any one of claims 1-23.
- 15
37. The method of claim 35, wherein the disease is a polyglutamine expansion disease.
38. A method of selectively inducing terminal differentiation of neoplastic cells in a subject and thereby inhibiting proliferation of said cells in said subject, comprising the step of administering to said subject a compound of any one of claims 1-23, in an amount effective to induce terminal differentiation of neoplastic cells in said subject.
- 20
39. A method of selectively inducing cell growth arrest of neoplastic cells in a subject and thereby inhibiting proliferation of said cells in said subject, comprising the step of administering to said subject a compound of any one of claims 1-23, in an amount effective to induce cell growth arrest of neoplastic cells in said subject.
- 25
40. A method of selectively inducing apoptosis of neoplastic cells in a subject and thereby inhibiting proliferation of said cells in said subject, comprising the step of administering to said subject a compound of any one of claims 1-23, in an amount effective to induce apoptosis of neoplastic cells in said subject.
- 30
41. A method of treating a patient having a tumor characterized by proliferation of neoplastic cells, comprising the step of administering to the patient a compound of any one of claims 1-23, in an amount effective to selectively induce terminal differentiation, induce cell growth arrest and/or induce apoptosis of such neoplastic cells and thereby inhibit their proliferation.
42. The method of any of claims 30-40, wherein said administering comprises administering a pharmaceutical composition comprising said compound, and a pharmaceutically acceptable carrier.
- 35
43. The method of claim 41, wherein the pharmaceutical composition is administered orally.